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10/815,220	03/30/2004	Aravind Yalamanchi	50277-2415	7098

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SUITE 550
SAN JOSE, CA 95110-1089

EXAMINER	
STEVENS, ROBERT	

ART UNIT	PAPER NUMBER
2162	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/815,220	YALAMANCHI, ARAVIND	
	Examiner	Art Unit	
	Robert Stevens	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20070719, 20070919*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Office withdraws the previous rejections of the claims under 35 USC §§101, 112-2nd paragraph and 103(a), in light of the amendment. However, the Office sets forth new rejections of the claims under 35 USC §103(a), in light of the amendment.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are, for the most part, moot in view of the new ground(s) of rejection.

On pages 17-18, Applicant asserts that Barrett must store event structures as explicitly defined in claim 1. Additionally, Applicant appears to be arguing the specification, rather than the claims.

It is first noted that the event structure was not explicitly defined by claim 1 (which states various associations/relations/definitions of conditions, attributes, etc. and an event structure. Additionally, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (e.g., the performance of real-time detection) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 19, Applicant argues that Barrett does not teach the storing of event structures.

The Office respectfully disagrees, noting that at least Fig. 4 of Barrett is suggestive of the storing of event data structures. Element #408 indicates that information is to be packaged in to a library event data structure, and #410 indicates that the event is passed to a library..

The remaining claims (2-41) were asserted by Applicant as being patentable for the reasons presented regarding claim 1.

The Office respectfully disagrees, and re-asserts the rationale set forth above regarding claim 1. See also, the substantially new rejections, set forth below.

It is also respectfully noted that Applicant's remarks on page 20, concerning dependent claims 2-40 (actually 2-20 and 22-40), are incorrect.

First, these claims were not objected to. They were rejected under 35 USC 103(a), which reflects a standard based upon obviousness. Second, allowable subject matter was not indicated, and there was no suggestion of "rolling up" dependent claims.

For at least these reasons, the Office asserts the rejections of the claims as set forth below.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/2/2007 has been entered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1, 7-8, 21, 27-28 and 41 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Barrett, Jr. et al. (US Patent No. 6,473,772, filed Dec. 17, 1998 and issued Oct. 29, 2002, hereafter referred to as "Barrett") in view of Yalamanchi et al. (US Patent Application Publication No. 2003/0212670, provisionally filed May 10, 2002 and published Nov. 13, 2003, hereafter referred to as "Yalamanchi") and Ling Liu et al. ("Continual Queries For Internet Scale Event-Driven Information Delivery", IEEE Transactions On Knowledge And Data Engineering, Vol. 11, No. 4, Jul/Aug 1999, pp. 610-628, hereafter referred to as "Liu").

Regarding independent claim 1: Barrett teaches ***A method for managing expressions in a database system, the method comprising the computer-implemented steps of: receiving an expression that identifies an event structure, a first set of one or more conditions related to said event structure, and one or more action preferences in association with said event structure,*** (See Barrett Abstract in the context of col. 7 lines 9-17, discussing event structures which provide a cause and effect mapping.) ***storing said event structure, said first set of one or more conditions, and said one or more action preferences in a table within in said database;*** (See Barrett Abstract, discussing the storage of event data structures.) ***during a database session, receiving a first event,*** (See Barrett Fig. 6 #601, showing event reception.) ***detecting that said first event is an occurrence of said event by comparing said first event to said event structure and determining that said first event corresponds with said event structure,*** (See Barrett col. 10 lines 25-30, discussing determination of an event.) ***based on said detecting, selecting said first set of one or more conditions for evaluation against said first event,*** (See Barrett Abstract, discussing sets of "causes" for events.) ***and determining whether said first event satisfies any of said one or more conditions in said first set;*** (See Barrett col. 9 lines 18-32, discussing determination conditions 1, 2 and 3.)

However, Barrett does not explicitly teach the further limitations as claimed. Yalamanchi, though, teaches ***wherein said event structure defines an event that corresponds with said event structure by defining a set of attributes that describe features of a corresponding event;*** (See Yalamanchi paragraph [0040] discussing an attribute set that corresponds to an event structure.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Yalamanchi for the benefit of Barrett, because to do so allowed a system designer to implement a mechanism for filtering expressions in conjunction with filters on other related information, as taught by Yalamanchi in paragraph [0007]. These references were all applicable to the same field of endeavor, i.e., event processing.

Additionally, Barrett does not explicitly teach the further limitations as claimed. Liu, though, teaches ***and in response to determining that said first event satisfies any second set of one or more condition, in said first set, then causing performance of an action corresponding to said one or more action preferences.*** (See Liu page 613 in the 3rd paragraph ("Note that this ECA ...") under "2.3 Continual Queries vs. ECA Rules" discussing the code immediately above concerning action execution upon satisfying complex conditions, and Example 1 under "2.2 Continual Query Examples" discussing a query governed by a trigger condition and "GROUP BY" conditions.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Liu for the benefit of Barrett in view of Yalamanchi, because to do so allowed a system designer to implement a system for providing timely response to critical situations, as taught by Liu on page 610 in the 2nd paragraph under "1.1 Motivation". These references were all applicable to the same field of endeavor, i.e., event processing.

Regarding claim 7: Barrett teaches ***wherein receiving an expression comprises receiving an expression that identifies an event structure derived from structure of tables, in said database, that store data that represent event occurrences***. (See Barrett Abstract, discussing database storage of event structures and causes that map to effects.)

Regarding claim 8: Barrett teaches ***wherein detecting that said first event is an occurrence of said event comprises detecting that said data underwent a change and that said change constitutes an occurrence of said event***. (See Barrett Abstract, discussing event causes and effects.)

Claim 21 is substantially similar to claim 1, and therefore likewise rejected.

Claims 27-28 are substantially similar to claims 7-8, respectively, and therefore likewise rejected.

Claim 41 is directed to a system for implementing the method of claim 1. As such, this claim is substantially similar to claim 1, and therefore likewise rejected.

6. **Claims 2-6, 9-20, 22-26 and 29-40 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Barrett, Jr. et al. (US Patent No. 6,473,772, filed Dec. 17, 1998 and issued Oct. 29, 2002, hereafter referred to as "Barrett") in view of Yalamanchi et al. (US Patent Application Publication No. 2003/0212670, provisionally filed May 10, 2002 and published Nov. 13, 2003, hereafter referred to as "Yalamanchi") and Ling Liu et al. ("Continual Queries For Internet Scale Event-Driven Information Delivery", IEEE Transactions On Knowledge And Data Engineering, Vol. 11, No. 4, Jul/Aug 1999, pp. 610-628, hereafter referred to as "Liu") and Kumar et al. (US Patent No. 7,149,738, filed Dec. 16, 2002 and issued Dec. 12, 2006, hereafter referred to as "Kumar").

Regarding claim 2: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein said event structure is represented as an object type in said database.*** (See Kumar col. 14 lines 35-47, showing a temporal event object coded in XML.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Kumar for the benefit of Barrett in view of Yalamanchi and Liu, because to do so allowed a user to create, edit and visualize data resource policies a user interface using intuitive, simple language constructs, as taught by Kumar in the Abstract. These references were all applicable to the same field of endeavor, i.e., event processing.

Regarding claim 3: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, discloses ***wherein receiving an expression comprises receiving an expression that identifies said event structure as a composite event structure having two or more primitive events that are each represented, in said database, as an object type embedded in said composite event structure.*** (See Kumar Fig. 11, showing a "Composite" event radio button.)

Regarding claim 4: Barrett teaches ***wherein detecting comprises detecting that said first event is an occurrence of a first primitive event of said primitive events by comparing said first event to a first primitive event structure of said composite event structure and determining that said first event corresponds with said first primitive event structure of-said;*** (See Barrett col. 8 lines 37-40, discussing the determination of which effect is to be invoked.) ***wherein determining comprises determining whether said first event satisfies any of said one or more conditions in said first set;*** (See Barrett Abstract, discussing events and set of causes.) ***the method further comprising the computer-implemented steps of persistently storing results of said determining in said database,*** (See Barrett Abstract, discussing database storage.) ***determining whether any of said one or more conditions in said first set are satisfied by said first event and whether any of said one or more conditions in said first set are satisfied by said second event,*** (See Barrett col. 8 lines 37-40, discussing the determination of which effect is to be invoked.)

However, Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***detecting an occurrence of a second primitive event of said primitive events by***

comparing a second event to a second primitive event structure of said composite event structure and determining that said second event corresponds with said second primitive event structure, (See Kumar Fig. 16, showing a second set of primitives.) ***determining whether said second event satisfies any of said one or more conditions in said first set,*** (See Kumar Fig. 16, showing a second event satisfying 1 or more first set conditions.) ***and wherein causing performance comprises, if said first event satisfies one or more first conditions in said first set and said second event of satisfies one or more second conditions in said first set, wherein a set consisting of said one or more first conditions and said one or more second conditions have one or more corresponding action preferences, then causing performance of an action corresponding to said one or more corresponding action preferences.*** (See Kumar Abstract discussing execution of a policy based on event occurrence, in the context of Fig. 11 showing an event specification GUI.)

Regarding claim 5: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***receiving information that specifies a period for which an occurrence of a first primitive event of said two or more primitive events is valid before an occurrence of a second primitive event of said two or more primitive events occurs;*** (See Kumar Fig. 12, showing a GUI or establishing temporal event details.) ***and wherein determining comprises determining whether said occurrence of said first primitive event and said occurrence of said second primitive event satisfy any of said conditions in compliance with said information.*** (See Kumar Fig. 16, discussing showing logical determination tree for conditions.)

Regarding claim 6: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***receiving information that specifies an order in which to evaluate said conditions with respect to said primitive events;*** (See Kumar Fig. 12, showing a GUI or establishing temporal event details.) ***and wherein determining comprises determining, in said order according to said information, whether said occurrences of said first and second primitive events satisfy said conditions.*** (See Kumar Fig. 16, showing evaluation based upon logical conditions modeled in a tree structure.)

Regarding claim 9: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein storing comprises storing one or more conditions from said first set as an EXPRESSION data type in an EXPRESSION column of a database table.*** (See Kumar fig. 16, showing boolean expressions for accessing database "I_TAX".)

Regarding claim 10: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein receiving an expression comprises receiving an expression that identifies a condition: from said first set, that is represented as a SQL query on said database.*** (See Kumar col. 14 line 66 – col. 15 line, setting forth an exemplary SQL query.)

Regarding claim 11: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***receiving a modification, in the form of a SQL operation, to said first set of one or more conditions.*** (See Kumar col. 14 line 66 – col. 15 line, setting forth an exemplary SQL query.)

Regarding claim 12: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***computer-implemented step of: during a database session, providing access to a database view that comprises a list of event occurrences that have been determined to satisfy any of said conditions from said first set,*** (See Kumar Fig. 12, showing event specification GUI.) ***a list of conditions from said first set that have been satisfied by event occurrences in said list of event occurrences,*** (See Kumar Fig. 13, showing a condition definition GUI.) ***and a list of action preferences that correspond with conditions in said list of conditions.*** (See Kumar Fig. 14, showing an Action Definition GUI.)

Regarding claim 13: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***in response to a request from a user of said database system, performing an operation associated with said view.*** (See Kumar col. 13 lines 50-67, discussing an exemplary operation.)

Regarding claim 14: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein performing an operation comprises performing an operation to resolve a conflict among two or more conditions that have been satisfied by event occurrences in said list of event occurrences.*** (See Kumar col. 14 lines 58-60, discussing the implementation of a conflict detection mechanism.)

Regarding claim 15: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein performing an operation comprises performing an operation that includes scheduling an action, from said list of action preferences, for performance outside of said database system.*** (See Kumar Fig. 14, showing a GUI that includes a field for choosing a different database.)

Regarding claim 16: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***receiving information that specifies that the step of determining is to stop when it is determined that said first event satisfies said first set of one or more conditions;*** (See Kumar Fig. 12, showing a temporal event details GUI having a "Till" date/time specification line.) ***and stopping determining whether said first event satisfies any of said one or more conditions in said first set when it is determined that said first event satisfies said first set of one or more conditions.*** (See Kumar Fig. 12, showing a temporal event details GUI having a "Till" date/time specification line.)

Regarding claim 17: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein receiving an expression comprises receiving an expression that identifies a temporal condition from said first set of one or more conditions;*** (See Kumar Fig. 12, showing a temporal details GUI.) ***wherein said temporal condition specifies that an associated action corresponding to said one or more action preferences is to be performed if a second condition from said first set is satisfied by an occurrence of an event, within a particular time after a first condition from said first set is satisfied by an occurrence***

of an event; (See Kumar Fig. 12, showing an "Event definition" section.) ***and wherein determining comprises determining whether occurrences of events satisfy said first and second conditions in compliance with said temporal condition.*** (See Kumar col. 13 lines 50-64, discussing an exemplary temporal event policy.)

Regarding claim 18: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein receiving an expression comprises receiving an expression that identifies a negation condition from said first set of one or more conditions;*** (See Kumar col. 4 lines 59-61, discussing the use of the logical operator "NOT".) ***wherein said negation condition specifies that an associated action corresponding to said of-the one or more action preferences is to be performed if a second condition from said first set is not satisfied by an occurrence of an event within a particular time after a first condition from said first set is satisfied by an occurrence of an event;*** (See Kumar col. 4 lines 59-61 discussing the use of "NOT", in the context of the Fig. 9 Action Definition GUI noting the "Condition" line.) ***and wherein determining comprises determining whether occurrences of events satisfy said first and second conditions in compliance with said negation condition.*** (See Kumar col. 13 lines 50-64, discussing an exemplary temporal event policy.)

Regarding claim 19: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein receiving an expression comprises receiving an expression that identifies a group of conditions, from said first set of one or more conditions, that, when a particular number of conditions from said group of conditions is satisfied by one***

or more occurrences of events, triggers performance of an action corresponding to said one or more action preferences; (See Kumar Fig. 13, noting "Where condition is" line having selectable members of a group of conditions.) ***wherein said particular number is less than a number of conditions in said group of conditions;*** (See Kumar Fig. 13 noting the "logical operator" selection line, in the context of col. 4 lines 59-61 discussing the logical operator "OR".) ***and wherein determining comprises determining whether one or more occurrences of events satisfy said particular number of conditions from said group of conditions.*** (See Kumar Fig. 13, noting the "condition definition" line.)

Regarding claim 20: Barrett does not explicitly teach the remaining limitations as claimed. Kumar, though, teaches ***wherein receiving an expression comprises receiving an expression that identifies a group of sequenced conditions from said first set of one or more conditions;*** (See Kumar Fig. 13, noting "Where condition is" line having selectable members of a group of conditions.) ***wherein said group of sequenced conditions specifies that an associated action corresponding to said one or more action preferences is to be performed if said conditions from said group of sequenced conditions are satisfied in a particular sequence by one or more occurrences of events;*** (See Kumar Fig. 13 noting the "logical operator" selection line, in the context of col. 4 lines 59-61 discussing the logical operator "OR".) ***and wherein determining comprises determining whether one or more occurrences of events satisfy said conditions from said group of sequenced conditions in said particular sequence.*** (See Kumar Fig. 13, noting the "condition definition" line.)

Claims 22-26 are substantially similar to claims 2-6, respectively, and therefore likewise rejected.

Claims 29-40 are substantially similar to claims 9-20, respectively, and therefore likewise rejected.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents

Chaudhuri et al	7,194,451
Chu	6,427,146

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Stevens whose telephone number is (571) 272-4102. The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert Stevens
Examiner
Art Unit 2162

September 27, 2007

JOHN BREENE
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